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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/786,331	04/04/2001	Jukka Suonvicri	4925-104PUS	8413
7590 Michael C Stuart Cohen Pontani Lieberman & Pavane Suite 1210 551 Fifth Avenue New York, NY 10176			EXAMINER CHO, UN C	
			ART UNIT 2617	PAPER NUMBER
			MAIL DATE 06/05/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/786,331	SUONVIERI, JUKKA	
	<b>Examiner</b>	<b>Art Unit</b>	
	Un C. Cho	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 21,22,25,26,28-33,35 and 37-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21,22,25,26,28-33,35 and 37-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 21, 22, 25, 26, 28, 29, 31, 33, 35 and 38 – 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chater-Lea (US 5,822,314) in view of Matsunaga (US 6,552,998 B1).

Regarding claim 21, Chater-Lea discloses monitoring time delays associated with communications between base stations and mobile stations (timing offset is calculated in a communication between a first and a second communication unit; Chater-Lea: Col. 2, lines 3 – 20 and see Fig. 5); calculating a timing advance which corresponds to time delays associated with communications between the base station and the mobile stations; wherein a determination is made that the communication is relayed via at least one of the network elements if the timing advance has a value which is greater than a predetermined value (calculates any timing offset required to be implemented by one of the communication unit so that the communication can be synchronized accordingly, as well as making a determination that the communication has been relayed through a relay; Chater-Lea: Col. 2, lines 21 – 26; Col. 5, lines 13 – 23 and Col. 6, line 36 through Col. 7, line 16).

However, Chater-Lea as applied above does not specifically disclose determining whether a communication was relayed via at least one of the network elements by detecting an increased time delays as compared to a known time delay of mobile stations communicating directly with the base stations; and sending an event notice to a network management system, when a presence of at least one of the network elements is initially detected. In an analogous art, Matsunaga remedies the deficiencies of Chater-Lea by disclosing such limitation in the flowchart of Fig. 2, whereas a delay error is calculated based on the system delay (known delay) – round trip propagation delay (measured delay) and after checking to see if the delay error is permissible or not it will transmit a notification; Matsunaga: Col. 14, line 40 through Col. 15, line 19. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Matsunaga to the system of Chater-Lea in order to provide two-way communication system that can improve shorten the system recovery time by adjusting the transmission delay or transmission level before an operation of an subscriber station and shortening the system recovery time when a link switching operation between a center station and a relay station occurs.

Regarding claim 22, Chater-Lea in view of Matsunaga as applied above discloses identifying the communication relaying elements based on the communication time delays (Chater-Lea: Col. 2, lines 15 – 20).

Regarding claim 25, Chater-Lea in view of Matsunaga as applied above discloses wherein the predetermined value is zero (BS checks the received frame number, if the expected frame number equals the received frame number then there is no difference or the difference is zero; Chater-Lea: Col. 7, lines 2 – 4).

Regarding claim 26, Chater-Lea in view of Matsunaga as applied above discloses wherein the mobile communication network is a GSM network (Chater-Lea: Col. 1, lines 30 – 34).

Regarding claim 28, Chater-Lea in view of Matsunaga as applied above discloses wherein the time delays are monitored by a base transceiver station (Chater-Lea: Col. 5, lines 20 – 23).

Regarding claim 29, Chater-Lea in view of Matsunaga as applied above discloses wherein the time delays are monitored by a base station controller (base station is inherently connected to a base station controller or it is built-in within the base station and Chater-Lea discloses that BS calculates timing offset; Chater-Lea: Col. 5, lines 20 – 23).

Regarding claim 31, Chater-Lea in view of Matsunaga as applied above discloses wherein at least one of said network elements is a radio repeater (Chater-Lea: Col. 3, lines 33 – 43).

Regarding claims 33 and 38, the claims are interpreted and rejected for the same reason as set forth in claim 21.

Regarding claim 35, the claim is interpreted and rejected for the same reason as set forth in claim 26.

Regarding claim 39, the claim is interpreted and rejected for the same reason as set forth in claim 28.

Regarding claim 40, the claim is interpreted and rejected for the same reason as set forth in claim 29.

Regarding claim 41, Chater-Lea in view of Matsunaga as applied above discloses wherein the steps of determining whether a communication was relayed via at least one of the network element is performed without requiring any additional monitoring equipment to be located in the network element performing the relaying and without requiring any additional signaling to be generated by the network element performing the relaying (Chater-Lea: Col. 2, lines 15 – 20).

3. Claims 30 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chater-Lea in view of Matsunaga as applied to claim 21 above and further in view of Prithviraj et al. (US 5,987,513).

Regarding claim 30, Chater-Lea in view of Matsunaga as applied above does not specifically disclose monitoring the communication the communication relayed via at least one of the network elements to determine various parameters which provide information with respect to network functionality and the network elements. In an analogous art, Prithviraj remedies the deficiencies of Chater-Lea

by disclosing such limitations in Col. 7, line 66 through Col. 8, line 67 and Col. 10, lines 3 – 6. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Prithviraj to the modified system of Chater-Lea in view of Matsunaga in order to provide an efficient way of monitoring network elements to know of a significant events, which may have occurred around the time a problem has precipitated in the network.

Regarding claim 37, the claim is interpreted and rejected for the same reason as set forth in claim 30.

4. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chater-Lea in view of Matsunaga as applied to claim 21 above and further in view of Bassirat (US 6,507,741 B1).

Regarding claim 32, Chater-Lea in view of Matsunaga as applied above does not specifically disclose wherein at least one of said network element is an optical tunneling configuration. In an analogous art, Bassirat remedies the deficiency of Chater-Lea by disclosing such limitation in Col. 7, lines 51 – 56. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Bassirat to the modified system of Chater-Lea in view of Matsunaga in order to provide an efficient and useful system and method that improves hand-off performance from cell to cell or from cell to another cell that uses different technology.

***Response to Arguments***

5. Applicant's arguments with respect to claims 21, 22, 25, 26, 28 – 33, 35, 37 – 41 have been considered but are moot in view of the new ground(s) of rejection.


***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Un C. Cho whose telephone number is (571) 272-7919. The examiner can normally be reached on M ~ F 8:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Un C Cho  
Examiner  
Art Unit 2617

  
GEORGE ENG  
SUPERVISORY PATENT EXAMINER

5/23/07 UC